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EFL TEACHERS' EXPERIENCE ABOUT INTEGRATION OF ONLINE COLLABORATIVE LEARNING TOOLS IN TURKEY

MA Thesis

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Abstract

EFL Teachers' Experience about Integration of Online Collaborative Learning Tools in Turkey

Collaboration, as one of the major skills in the 21st century, is focused on preparing students for a world characterized by critical thinking and problem-solving. Hence the need for teachers to integrate into their classroom such tools that support students' collaboration in real-time. This study investigates teachers' experiences and perceptions about introducing collaborative learning tools to their students. The result of the study shows that teachers acknowledge the need to incorporate collaborative learning tools in their teaching activities. However, major barriers to successful integration were highlighted, such as school management policies, curriculum boundary, work overload, lack of time, students' ego, and lack of adequate training for both teachers and students.

Keywords: EdTech, Collaboration, Collaborative Learning Tools, Integration.

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Introduction

While the education system across the globe is going through a paradigm shift to make it fit well with 21st-century demands, the role of educational technology has become an unignorable one (NETP 2017). Technology has helped to build more professional learning communities that prepare learners for a world characterized by creativity. There is no gainsaying in the fact that technology has made learning become more engaging and thus empowering learning experiences that prepare learners to be active, creative, knowledgeable, ethical and responsible digital citizens in a globally connected society. More classrooms than ever before have the technology, including internet connectivity and hardware (eTwinning 2016, Tiven et al 2018).

Educational Technology

Educational Technology, otherwise known as EdTech, involves the use of different technological and digital tools for teaching and learning. It further refers to the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources (Januszweski and Molenda, 2008). According to Spector (2015), Educational Technology involves the disciplined application of knowledge for the purpose of involving learning, instruction and or performance. Educational technology has changed through the years from the age of pre-mechanical devices such as abacus for teaching to the digital age involving the use of communication and information storage devices.

The incorporation of technology into schools has, to a greater extent, changed how teachers and students gather, access, analyze, present and transmit information. It has further helped to democratize information in classrooms as well as help differentiate instructions (Joyce, 2015). On the hand, technology in schools is now being metamorphosed from the position of a school subject that caters for teaching general operation of devices, to the position of teaching and impacting in the students how they can use technology devices to make a unique difference in the society. All over the world, governments, education systems, researchers, school leaders, teachers, and parents consider technology to be a critical part of a child's education (Eady, & Lockyer, L. 2013). Students constantly interact with technologies such as iPods, mobile phones, the internet and social networking tools outside the classroom and have an expectation that these technologies will also support their learning in the

classroom (Kusum 2014). Technology creates in students a deep sense of acquiring multi-tasking skills, and the ability to slow down and go back over lessons. While it gives them access to other information outside of the book it also at the same time promotes and encourages learning reflection on the part of the learners.

On the part the teachers, the use of technology in education has brought about a lot of improvements, such as making students' learning progress easily trackable for teachers using different learning analytics tools (Born, 2017); helping teachers to support students with learning needs (Dikusar, 2018); promoting individualized teaching and learning (Dikusar, 2018); and removing the old educational boundaries between students and teachers, which now opens up the liberty to collaborate in real-time using advanced educational technologies (Sarah, 2013).

While the education system across the globe is going through this paradigm shift to make it fit well with 21st-century demands, the role of educational technology has become such an important one. Technology has helped to build more professional learning communities that prepare learners for a world characterized by creativity. There is no gainsaying in the fact that technology has made learning become more engaging and thus empowering learning experiences that prepare learners to be active, creative, knowledgeable, ethical and responsible digital citizens in a globally connected society. The general accessibility and regeneration of EdTech were due to technological developments in ICT relating to computers, mobile phones and the internet (Escueta, 2017). Incorporation of technology has led to an increasing consensus among instructors and the public that it should be widely adopted in the process of educating students (Fouts, 2000).

Role of Teachers in Technology integration

However excellent the impact of technology has been and would still be on education, it should be noteworthy that the role of teachers in bringing out this reality cannot be overemphasized. Technology, with all the advantages it offers, is dependent on the human factor; only people decide whether something will take place in their lives or not (Aliya 2015). There is a need for teachers to be well knowledgeable about the technology itself and its meaningful implementation, in such a way that would actualize the targeted educational goals and thereby become effective in the classroom. A lot of research has been carried out on

the need for the active involvement of teachers in technology integration in the classroom, and a number of them have placed emphasis on teachers' perception about technology. The vast majority of these studies established that the beliefs of teachers in using digital technologies is crucial to its successful integration; while their disbelief would bring about its failure in transforming classrooms. Van Braak (2001) confirms that teachers' attitudes toward ICT influence their acceptance of the technology, predicting whether teachers will integrate it into their classrooms or not.

On the other hand, different research has revealed other challenges and barriers against the successful integration of technologies in the classrooms by teachers. According to Newhouse (1999), poor computer literacy, lack of time, lack of confidence, and hardware malfunctions were identified as the barriers preventing teachers from integrating technology. Schoepp (2005) posits that the belief that faculty are unsure how to integrate technology with teaching stood to be a major barrier, which also corroborates one of the findings of Newhouse, that is, poor computer literacy. According to Khalid (2009), three major factors were revealed; lack of confidence, lack of competence, and lack of access to resources on the part of the teachers. This was further elaborated by Wachira and Keenfwe (2010) as they identified lack of equipment, lack of equipment support, the organization culture, teacher beliefs and attitudes about teaching, and accepting the change to digital teaching as the significant barriers to technology integration into the classroom by teachers. Muhammad U.F. & Abdul F.S. (2018), in an attempt to categorize barriers identified by researchers between 1995 and 2006, highlighted six major categories of the barriers faced by the teachers in integrating technology into their instructions: (a) resources, (b) knowledge and skills, (c) institution, (d) attitudes and beliefs, (e) assessment, and (f) subject culture.

All of these studies point to the fact that the integration of technology in education across the globe is faced with diverse barriers.

Concepts of Collaborative Learning

Collaborative learning is one of the practical concepts of Educational Technology. It describes a situation in which particular forms of interaction among people are expected to occur, which would trigger learning mechanisms (Pierre, 1999). The teaching and learning strategy basically helps to promote team spirit among students in small groups in view of optimizing their own and each other's learning (Johnson and Johnson 1999). A paradigm shift has been witnessed from a teacher-centered approach of learning while considering a collaborative

method of learning, which is increasingly becoming an instructional approach of choice in both the traditionally direct, and online educational settings due to the several positive effects it has on students' educational results (Pattanpichet, 2011). The collaborative learning concept is organized in such a way that a student is able to achieve learning goals as fellow student achieve theirs. In other words, the success of one student directly implies the success of other students (Gokhale, 1995). Ideas are exchanged while skills are also developed when applying collaborative learning techniques. A class setting with an idea of collaborative learning helps learners have the opportunity to converse with peers, present and defend ideas, exchange diverse beliefs, question other conceptual frameworks, and are actively engaged (Srinivas, 2011). Responsibilities are accepted among group members with a common goal and no view of competition among their peers. This helps in promoting social interactive skills between learners and their peers, leading to an improved learners' linguistic competence and communicative skills (Jiang, 2009).

There is a high level of possibility that students who learn collaboratively are able to share knowledge for a longer period of time if compared to students who learn individually. Collaborative learning is also different from instructions based on teacher-centered knowledge and skills, as the main source for students. A communicative language teaching process where common ideas are shared as a result of interactions between teachers and students and among students is characterized in a collaborative learning process (Zang, 2010).

The practice of collaborative learning is vastly growing in online education because many programmers and instructors of online courses are beginning to realize its benefits and it has conversely been incorporated as one of their instructional strategies of choice in the online environment (Ashong and Commander, 2012). Certain benefits of online collaborative learning have been cited such as critical thinking and problem-solving skills, construction of knowledge and meaning coupled with self-reflection skills ((Johnson et al. 2000, Brindley et al. 2009). Students have the liberty of engaging themselves in deep discussions and sharing of ideas, and by so doing they develop their skills on critical thinking, problem-solving, construction of knowledge and self-reflection. OECD (2017) gives three advantages of collaborative learning over individual problem solving because it allows for:

- an effective division of labor
- the incorporation of information from multiple perspectives, experiences, and sources of knowledge

- enhanced creativity and quality of solutions stimulated by the ideas of other group members.

Constructivism theory of Learning and Collaborating Tools

Constructivism theory is an art of learning where learners actively construct their own knowledge and meaning from their experiences (Fosnot, 1996). The teacher's responsibility becomes that of the learner, where the learning concept is based on experience and personal knowledge. New technologies have caused a paradigm shift for learning process using constructivism bases. According to Enobun (2010), constructivism is a bold departure from traditional objectivist strategies, and the goal is to help the learner play an active role in assimilating knowledge onto its respective cognitive framework. Enobun (2010) discussed further on the synergy of collaborating learning tools using Web 2.0 technologies while claiming the fact that the use of internet with specific reference to Web 2.0 can be employed as a tool in collaboration with student's intelligence to enhance learning in developed and developing countries. Several researchers, under the constructivist psychology, have carried out investigations on how constructivism and certain connective theories can be sufficiently used in education technology for the digital age (Mattar, 2010). Some have also proven that construction and synthesis of knowledge through groups outperform individual learning (Brindley et al. 2009). This in line with Zhang (2002) who earlier discovered that students who use computer and internet had higher achievement test scores when using constructivist methods.

The emergence of Web 2.0 and Collaborating Learning Tools

As mentioned earlier, a lot of changes have been witnessed in EdTech due to the advent of the internet. Such drastic change was seen during the switch of Web 1.0 to the 2.0 version of the web at the turn of the century. Web 1.0 refers to the first stage in the World Wide Web, which was entirely made up of web pages connected by hyperlinks (Technopedia). This type of technology did not have the interactivity enablement which allows the users to collaborate in real-time. Its functionality was based on static websites. But this changed at the introduction of Web 2.0, which is a platform or application that enables users the control over their contents and assist collaborations between individuals and groups (O'Reilly 2007).

One of the major uniqueness of 21st-century education is the emphasis put on preparing a child for the world that doesn't yet exist, through the development of various

skills such as problem-solving, creativity, analytical thinking, communication, and collaboration; commonly known as 21st-century learning skills. Preparing learners for the world that does not exist is proportional to getting them ready to solve complex problems in the future. Therefore, as learners are being trained to develop problem-solving skills, there is also need for them to possess the ability to collaborate with real and virtual partners globally, to draw on existing knowledge to create new knowledge, and this was brought into reality at the introduction of Web 2.0 which allows for online collaboration among teachers and learners.

According to Li and Pitts (2009), universities and colleges have incorporated and leveraged Web 2.0 technologies not only to enhance their traditional curriculum but also extend course offerings beyond their college campus. The Web 2.0 technology platform exhibits available tools which help in facilitating and promoting communication and collaboration. Such tools include wiki, blogs, podcasts, social networks, and newspaper groups. These tools are highly interactive and stimulate the user's active involvement and participation (Enobun, 2010). For example, Wiki provides a platform for provision of collaborative writing as it is designed to enable anyone to with access to add or modify web contents. These collaboration tools cannot be ruled out as part of the needed technologies in the 21st century. Its impact on learning has been documented by various researchers. Other media tools such as blogs, podcasts, and social networks encourage online participation, and students can take hold of this advantage to talk and share ideas even after class. Gerbic (2010) reports claimed that Wiki and online discussions are both helpful for online English learners because they had more time to interpret their reading and compose their responses. Blogging can also serve as a means of collaboration between teachers and students. Students who use blogs can also obtain innovative, critical, communicative and collaborative skills, which may be useful in scholarly and professional perspectives (Duffy and Bruns, 2006).

It's important to note that students of the digital age are social by nature. They text, post, update, share, chat, and constantly co-create in technological environments with each other. When they are unable to do this in school, they become disengaged and unattached to their learning (WSLearning, 2016). This indeed speaks volume on why collaborative learning tools should not be seen as distractions to students but as tools that would facilitate their classroom engagement thereby building in them, team spirit. The idea of putting learners at the center of learning in the 21st century requires that their learning needs be put into

consideration, and learning content and tools are designed to promote their engagement. In view of this, the adoption of collaborative tools to promote learners' engagement should be given high priority by any teacher that is involved in teaching activity in this media age.

The benefit of using collaborative tools for both teachers and students under the umbrella of students' engagement is obviously numerous, among which are sharing of digital contents, creation of live sessions for brainstorming, showcasing of projects, giving teaching responsibilities to learners, monitoring of students' progress on real-time, giving live feedback, and promoting teachers and students' reflections. Students who truly collaborate construct knowledge together, in the digital age with collaborative tools. When we ask students to collaborate, we're asking them to take responsibility for their learning, Robin Newton (2012).

Challenges to the Integration of Collaborating Learning Tools

As good and popular collaborative learning is, there is still evidence that shows that it's not being effectively practiced and adopted by teachers in the classrooms. David Piercey (2010) rhetorically questioned, "why should this be so? Why should something that's considered a best practice not be practiced as consistently as pedagogy demands? Why should we say we're doing something when, in fact, we may be resisting it? Why should our public pronouncements profess our support for these practices when our public behaviors sometimes seem to demonstrate the opposite?"

Several researchers have carried out different studies that seem to provide answers to these highlighted questions; among which are compatibility and interoperability between individual collaborative devices, lack of full support staff to help troubleshoot, cultural differences of online learners, and many others. A study conducted by Capdeferro and Romero (2012) show that online learners get frustrated with collaborative learning as a result of disparity in commitment on tasks assigned and lack of common learning goals among students. Roberts and McInnerney (2007) highlighted certain challenges such as; students antipathy towards group work, group selections, lack or minimal essential group work skills, free rider, possible inequalities of students' abilities, sudden group members' departures, and assessment of individuals within groups. Liu et al. (2010) also points out poor motivation, lack of accountability and negative interdependence as some major challenges as well.

However, in this study, the emphasis would be placed more on such challenges related to EFL teachers' experience and factors that affect their decision on the choice of certain collaborative tools to promote engagement among learners.

The Turkish education system and technology

The Ministry of National Education oversees K-12 education in Turkey. The K-12 education system of Turkey comprises of the Pre-primary education which is optional for children aged 3 to 6, Primary education which is compulsory for all children aged 6 to 14, and the Secondary education (Lise) which is also compulsory for children aged 14 to 18, and includes general, technical and vocational high schools.

Parts of the general strategies for education in turkey include:

- making the maximum use of technological facilities, particularly computer technology, at all levels of education to develop distance education methods;
- computer-assisted education shall be expanded to include all levels of education, particularly primary education institutions and schools shall be equipped with tools and equipment to meet the needs of the 21st century (Turkish Ministry Of National Education Report 2005).

"The use of information technology in education in Turkey started with the establishment of the "Specialized Commission on Computer Education at Secondary Schools" by the Ministry of National Education in 1984. Activities up to 1990 included the purchase of computers, development of software, and in-service training of teachers serving at general and vocational secondary education institutions." (Turkish Ministry Of National Education Report 2005).

Included in Turkish primary education curriculum is computer literacy and education, which also gave birth to the establishment of learning centers known as "Information Technology Classes" in all primary schools, with the sole aim of teaching students to use information technologies tools for productivity.

Though Turkey is not part of the European Union, her curriculum has recently been revised to take into account the European Union Education Standards, among which is innovations in technology. Parts of the Turkish basic education report 2005 reads: "Activities have been carried out at every level of our education system in order to use and expand new technologies in education and ensure that teachers and students make use of information

technology in every lesson". This gives a strong indication that Turkey as a country operates on such a curriculum with

Aims of the study and research questions

This study is carried out with the sole aim of launching an inquiry into various collaborative learning tools that could be used to engage EFL learners, and further, examine the general perceptions of EFL teachers in Turkey about the adoption of collaborative learning tools for teaching purposes.

The following research questions were addressed:

1. Do EFL teachers perceptions show any relationship between collaborative learning tools and EFL learning?
2. What are EFL teachers' personal experiences of integrating online collaborative learning tools?
3. What factors do teachers perceive as important to the successful adoption of collaborative learning tools in EFL learning?

Methodology

This study is based on the objective of investigating the perceptions of ESL teachers about the use of collaborative learning tools. It went further to inquire about the experiences of these teachers about the collaborative tools and finally examines the factors perceived to be important to the successful adoption of collaborative learning tools in EFL learning. This study will inform EFL teachers more on the effective reasons for the meaningful adoption and use of collaborative learning tools with EFL students.

For the purpose of this study, the focus group interview was employed as an instrument of data collection. Focus group interview was specifically chosen for this study to serve as a rich source for exploring the teachers' inner feelings, attitudes and mental impressions about the adoption and use of collaborative learning tools in EFL classrooms.

In Anderson (1990, p.241), a focus group is described as "a group comprised of individuals with certain characteristics who focus discussions on a given issue or topic". This is well elaborated in Denscombe (2007, p.115), that "focus group consists of a small group of people, usually between six and nine in number, who are brought together by a trained moderator (the researcher) to explore attitudes and perceptions, feelings and ideas about a topic". A focus group interview provides a setting for the relatively homogeneous group to

reflect on the questions asked by the interviewer (Rana & Muhammad, 2013). The questions of the focus group interview revolve around the research questions of this study, which emphasizes teachers perception about the adoption of collaborative learning tools in EFL classrooms.

Population and Sampling

Since it was outrightly impractical to study a whole population of EFL teachers in Turkey through focus group interview, the use of sampling was employed to infer needed information about the adoption and use of collaborative learning tools from the EFL teachers. A form of Non-probability sampling scheme called purposive sampling was used for this study for the main objective of producing a sample that can be logically assumed to be representative of the general population. The selected school for this study was a K-12 school in Ankara, the second largest city in Turkey by population.

Eight teachers participated in the interview for this study, and their responses to the interview questions were digitally recorded. The heads of the departments of English at both primary and secondary sections of the school were approached by the researcher, and he sought their permissions to interview the teachers for ongoing research. Both departmental heads later informed the researcher about the readiness of a few out of all the teachers contacted. To ensure anonymity and for easy identification, participants of the study interview were assigned code names such as SS01, SS02, SS03, SS04, PS05, PS06, PS07, PS08. The participants are EFL teachers working at the same school. While SS01, SS02, SS03, and SS04 work at the secondary section of the school, PS05, PS06, PS07, and PS08 work in the primary section. Their demography information was collected orally by the respondent before the commencement of the interview. Their years of classroom teaching experiences range from five to twenty-five years, and their experience in the use of modern education technology varies between two and five years (*see Table 1*).

Table 1. Participants Demographics.

Participant	**SS01**	**SS02**	**SS03**	**SS04**	**PST05**	**PS06**	**PS07**	**PS08**
Age	6-30	36-40	51-55	31-35	41-45	41-45	41-45	31-35
Gender	Female	Female	Female	Female	Female	Female	Female	Female
School	Secondary	Secondary	Secondary	Secondary	Primary	Primary	Primary	Primary
Teaching Experience	7 years	6 years	25 years	8 years	12 years	6 years	10 years	5 years
EdTech Experience	3 years	3 years	5 years	2 years	3 years	2 years	2 year	2 year

Focus-group Interview

For this study, a focus group interview was used as the data collection procedure. This type of data collection instrument is considered because it is more appropriate to gather data related to people's opinion, attitude, experience, and perception. According to Denscombe (2007), "focus group consists of a small group of people, usually between six and nine in number, who are brought together by a trained moderator (the researcher) to explore attitudes and perceptions, feelings and ideas about a topic". Focus group interview permits a richness and flexibility in the collection of data that are not usually achieved when applying an instrument individually; at the same time permitting spontaneity of interaction among the participants (Freitas et al, 1998).

Six questions were developed by the researcher for this study, with the sole aim of addressing the research questions for study (*see Appendix A*). An introductory question was asked from all the participants about their familiarity with collaborative learning tools, and this was followed by other questions that inquired about their experience, perceptions, and challenges in the course of integrating collaborative learning tools. The interview section lasted about twenty (20) minutes and was recorded in an audio format. The audio file of the interview was later transcribed and formatted in Google Docs. Certain unimportant missing words were edited out of the final transcription of the interviews, while some are represented

with ellipsis to the preceding part of the response to show that something was omitted (Thibodeaux, W. 2011).

Data Analysis

Data collected through the interview was checked thoroughly for consistency and completeness. It was later transcribed from oral format (words) to text and was also subjected to a thorough analysis. A coding guide was developed to code and enter each question and theme for analysis using NVIVO software. Nvivo is great for organizing data and helping to make sense of it during the process of analysis. It ensures easy, effective and efficient coding which makes retrieval easier (Zamawe, 2015). In the course of analyzing the data from the focus group interview, using NVivo made it easy for me to link different paragraphs from the interview transcript to the theme nodes they correlate with. Such a task would have been a very tedious one if it was done manually. Nvivo allows ideas and issues to emerge more freely without the compulsion to force data into already established categories (Buchanan and Jones 2010).

Results

This study examined the experience of EFL teachers about the adoption of Collaborative learning Tools for K-12 EFL students' use. (Katrina, 2017) describes students of this media age as highly social beings who learn differently because of their immersion in technology. Hence the need for educators to embrace the new learning styles their tech-savvy students possess and develop strategies to meet those needs. Therefore, the integration of collaborative learning tools to students fulfills the goals of building such curriculums that resonate with their interests.

The use of collaborative learning tools by students have been faced with different challenges, among which are lack of participation among group members and lack of feedback from instructors (Muuro et al 2014). This study, therefore, employed a qualitative research method to investigate teachers' experiences about their students' interactions with collaborative learning tools. It also tries to find out to what extent the teachers' knowledge about collaborative learning tools has helped to facilitate its integration in the classroom.

It's important to note that the school where the respondents in this study work operate the Bring Your Own Device (BYOD) policy; all students and teachers have access to a personal Apple Ipad device for the purpose of teaching and learning, and teachers are

additionally assigned one laptop each to work with. All the classrooms, libraries and laboratories are equipped with projectors and smartboards. Therefore, it won't be wrong to submit that the school can be considered a tech-savvy one in terms of investment in technology.

Themes and Sub-Themes

Themes for this study were drawn from the interview questions and the research questions, hence the use of pre-determined or a priori themes in qualitative analysis. (Sang & Sitko, 2015; Creswell, 2007; Seidman, I.E. 1998). Five predetermined themes were drawn for the purpose of the data analysis, and these themes further helped extract a number of sub-themes from the interview data (see figure *1*).

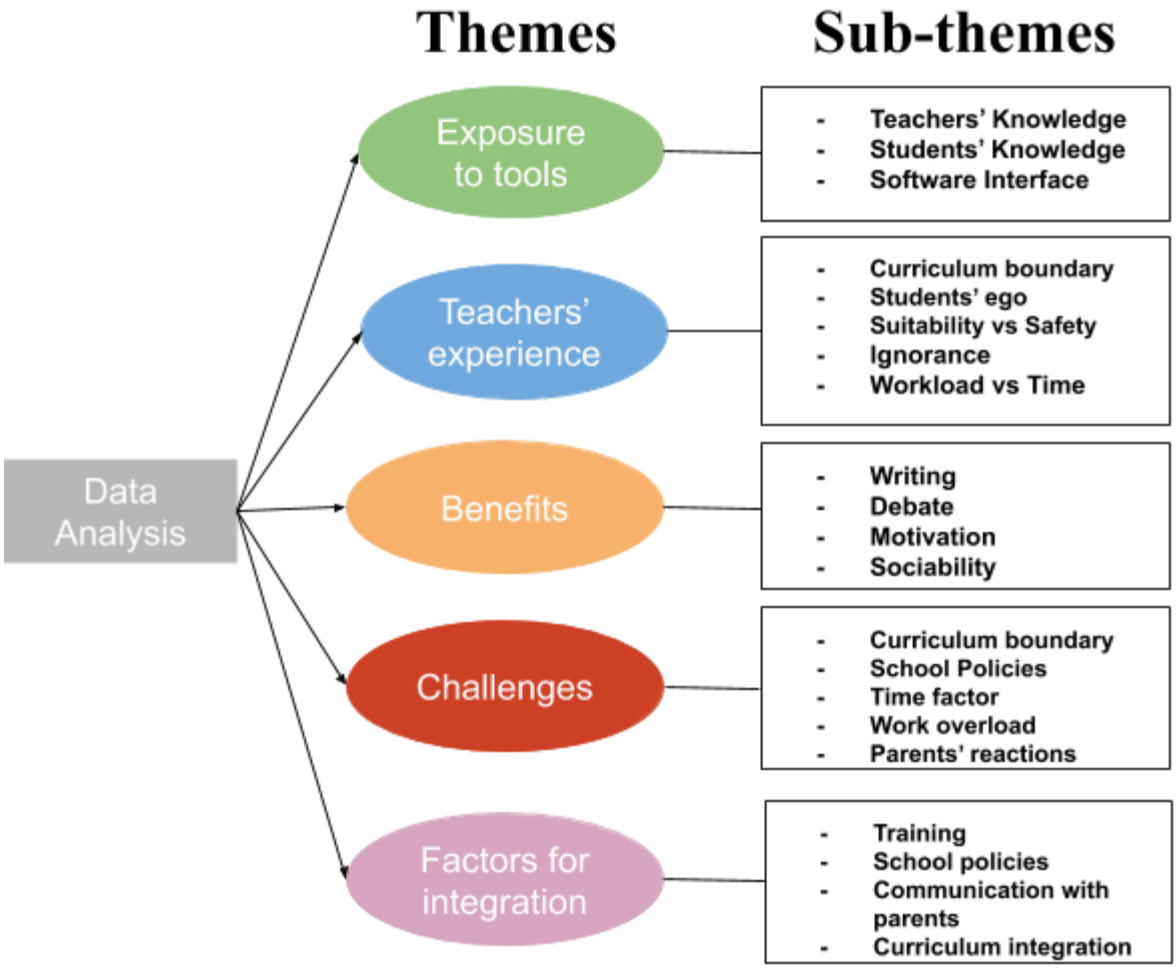

Figure 1. Showing the relationship between Themes and Sub-Themes generated from the interview data.

As shown in figure 1, five themes were identified in this study; exposure to tools, teachers' experience, benefits, challenges, and factors for integration. These themes were outlined to address the research questions of this study (*see table 2*). In the course of analyzing the interview data, there was the emergence of other themes that are related to the earlier outlined themes. These extracted themes are categorized as sub-themes as illustrated in *figure 1*.

Table 2. Relationship between research questions and themes.

	Research Questions	**Main Themes**
1.	Do EFL teachers perceptions show any relationship between collaborative Learning tools and EFL learning?	Benefits Exposure to tools Teachers experience
2.	What are EFL teachers' personal experiences of integrating online collaborative learning tools?	Exposure to tools Teachers Experience Challenges
3.	What factors do teachers perceive as important to the successful adoption of collaborative learning tools in EFL learning?	Teachers experience Challenges Factors for integration

Teachers' Experience

This theme directly explains the first, second, and third research questions of this study and it goes to the depth of revealing the perceptions of the participants about the use of online collaborative learning tools with EFL students. The first question of the interview requires the interviewees (EFL teachers) to talk about their familiarity and experience using the online collaborative learning tools. They provided answers about their individual experiences on how positive it is, their personal challenges and ways it could be more efficient in the learning process.

While the answers provided by the participants show their awareness about their familiarity with the general idea of classroom collaborative learning. One of the participants, in her response to this question, said:

"*Actually we use them in class but outside the class we often have, you know, some project things to work with, you know, as a group but not… we don't often use some kind of tools." (*SS02)

This is further reiterated in the response given by another participant who stated that she does make the students work together in the classroom using their Ipads to research online, but not to the extent of collaborating using an online platform to work. In her response:

Yah, they do use their iPads in the classroom together but I never gave them homework that they can do online.

...they actually do researches for a topic together, they could use their own ipads on the topic or subject, but we don't collaborate on using the iPads, either in the classroom environment, or homework outside of the school, I know the experience. (PS01).

However, one of the respondents, with her response, seems to have a different experience about the use of online collaborative learning tools. The participant commented:

Sometimes I use ClassDojo, for example when I assign the student to prepare… like a project, presentation whatever, if we upload it on the ClassDojo the others are supposed to comment on the project that you already presented, but it is not within our school curriculum so sometimes I do not have that much time to do that, because we are already packed up all the home works… **(SS01)**

She went further to explain other factors that never made her experience stand a test of time:

We used it like five times through this year..., it was nice, like I created a profile for each student and we had the controller profile as teachers, so they can have a free debate and one of them can upload something and the others can comment on it. So it was pretty effective. There is also that video tool but I didn't use it because I wasn't sure how effective and safe it could be... because some of them are still not ready to use the internet safely in the way like… I didn't use the video tool but I used the uploading part. **(SS01)**

She opined that the students were just not prepared to use the internet safely or probably they simply lacked the crux of using these tools.

Exposure to tools

Another important theme that helps to answer the question about teachers' experience using online collaborative learning tools is 'exposure to tools'. This is illustrated in *figure 2* as having a relationship with research questions one and two. This theme encompasses both the knowledge of the teachers and that of the students about online collaborative learning tools. The theme highlights how students and teachers were able to meaningfully explore different platforms provided on collaborative learning tools. Interestingly, this theme addresses more on teachers who have had practical experience using collaborative learning tools. One of the respondents expressed her experience to support this theme as one of the challenges she faced introducing the tools to the students. She explained:

> *The use of technology was the main challenge I guess, because they were not used to using that tool, classdojo was something that I used, but the others BrainPOP, Onenote, and all the other tools, they have been using it for a year, so when you come up with something new, usually in secondary school, I am talking about 5th graders, they usually have technology challenges I guess, some of them, we have students who cannot even enter the passwords sometimes.* **(SS01)**

In a similar occurrence, she explained how the students had some difficulties interacting with Prezi when being introduced as a collaborative tool to prepare a group presentation. She explained:

> *and for some of them the interface was not very easy to use in Prezi, I guess not so suitable for secondary school kids, because I saw it on our business website they made the staff work together when they were not together actually, I tried to apply it but it didn't work well I can say.*

Though she related the setback to the fact that the tool was not suitable for the students if looked into critically it is as a result of lack of exposure to the tools.

Benefits

The theme of benefits has its connection to research question one (*see diagram 2*). It reveals the beliefs of the teachers about the usefulness of online collaborative tools to both teachers and students. And also explains how the tools help achieve EFL teaching and learning goals.

While speaking to justify this, the respondent (SS01) opined that collaborative learning tools are beneficial in different ways as explained highlighted below:

> *I guess it's effective both in writing, not as specific for skills part but effective in collaboration part. I guess because they were supposed to leave comments on the others' projects and they were desired to give positive feedback. So I guess it was nice because they are usually… I guess the students in Turkey, in general, are usually used to doing something alone and being successful on their own so, appreciating others' success was my main goal. If something is nice, appreciate it, give comments, maybe we can make it better together.* **(SS01).**

In another part of her explanation, she saw the tools as being helpful for students to participate in the close discussion and probably productive arguments. she hinted on the need for the students to engage in debate while using the tools. She explained:

> *...the time that we used it actually it was pretty effective I guess. We used it like five times through this year, it was nice, like I create a profile for each student and we have the controller profile as a teacher,* ***so they can have a free debate*** *and one of them can upload something and the others can comment on it.* **(SS01).**

Moreover, both respondents PS01 and PS03 emphasized that the use of these online collaborative learning tools could increase participation, engagement, and liveliness in the learning process when observed among the students whilst also making them sociable.

> *It needs to be used more nowadays, because the traditional homework system is now old fashioned, PS03 (name mentioned by the speaker) said, kids feel more motivated and they become like 'o gosh this is something we could do and work at home' but together, instead of sitting down and doing your homework on your own at home, working with somebody… I think it's a brilliant idea.* **(PS01)**

> *It makes them more sociable, absolutely sociable, when they are on their own at home they still feel they are socializing and they are also learning together. And from a teachers point of view as well, it motivates them, it is a better idea of how to give homework. I love that.* **(PS03)**

Challenges

The theme of challenges, which resonates with research questions one and three, is actually the most prominent one as shown from the interview data. This theme shows different hindering factors that make it so difficult for teachers to successfully integrate collaborative learning tools in their classrooms. Looking into the response given by one of the participants while being asked about her experience using the tools, she said:

> *I have to follow a plan you know, and we cannot do anything else, we don't have enough time to do them* **(SS03).**

This indicates that her effort to adhere strictly to the plans given by the school stands as a barrier for her to integrate the tools. Another respondent established this as she explained:

> *...it is not within our school curriculum so sometimes I do not have that much time to do that, because we are already packed up all the home works…* **(SS01)**

Another respondent gave a similar response, referring to the fact that she was preparing her 8th graders for examination, she can't think of using a tool while preparing the students for the examination. In her words:

> *And to me I am an 8th graders teacher, and because of that we can't use this kind of things, you know, they have an extra exam and they are preparing for exam…* **(SS04)**

In the same vein, It seems EFL teachers are restricted from using certain learning tools due to limitations in school management policy, which may not permit the teachers. A typical example is seen in the response of one of the teachers:

> *According to the system, you know according to our system we have some kind of restrictions issue… we do our best for collaboration as teachers but you know… (she fades off with a kind of gesture of being careful of not saying what would get her into trouble with the school management)* **(SS04)**

This is a reflection of the expression by another respondent that said:

> *"I have to follow a plan you know, and we cannot do anything else"* **(SS03)**.

This indeed indicates that respondents are not having the liberty to choose any tool that they feel is good for whatever lesson they need to teach.

One of the respondents also perceived that parents don't seem to value the idea of collaborative outside the confines of school, due to the fact that it may interfere with their planned pleasurable functions, which may not consequently help the interest of students in valuing teamwork assignments.

> "*...especially ın 7th grades, when I give them any paper-based exercise I let them do it together in a group in the classroom, because I think parents don't like them come together during the weekends or weekdays because they have all have some activities out, maybe they will not find any time, so I let them do it in the class.* **(PS03)**

Factors for Integration

This theme tries to find an answer to the third research question in this study. It reflects the necessary actions to be taken to ensure that teachers and students have effective integration and use of online collaborative tools. This seems to be a forerunner to what would be discussed in the recommendation for this study. The respondents during the interview identified training for the teachers as one of the factors to encourage the use of collaborative learning tools by teachers. When she was asked if she ever attended any training related to online collaborative learning, one of the interviewees responded:

> *I didn't attend any training, I know it is a good thing. During university days our teachers helped us, so I know its a good thing. In teaching, it is very important I know.* **(PS03)**

This was supported by another respondent who admitted that:

> **...** *it would be very useful for teachers to get training on that. It needs to be used more nowadays because the traditional homework system is now old fashioned...***(PS01)**

Discussion

Interpretation and Findings

The findings in this study are interpreted based on the themes earlier highlighted and established from the interview data. And for further clarity, this interpretation will be done within the context of the research questions for this study.

Research Question 1

The first research question asked if EFL teachers hold any perception that EFL Learning has any relationship with collaborative learning tools, that is if the use of online collaborative learning tools could definitely help students develop or improve on any language skills.

Data from the interview suggest that all the respondents believe and agree that online collaborative learning tools could be influential in students learning process. One of the respondents in the secondary section of the school, from her own experience, claimed that the use of ClassDojo aided an appreciable writing zest among the students as they were keen to get good ratings on group works given. Agata (2016) sees ClassDojo as an app that has stirred controversy and drawn criticism from some who are concerned about its ethical implications, but this respondent considered it a veritable tool to stir up students' engagement. In the EFL curriculum, writing skill stands as one of the core parts that a teacher must focus on and develop more in the students. To become competent users of English, one must focus on both productive and receptive skills. Writing and speaking are productive skills while listening and reading are receptive skills (Hidayati 2018). Writing as one of the productive skills was leveraged upon by the teacher, being part of her targeted goals for adopting collaborative tools to ensure that, by the reason of writing comments in the form of feedback on others' projects, students consciously brush up and develop on the basic principles of writing, which cuts across grammar and spelling. According to Afrin (2016), writing remains the most used skill in evaluating students' performance in almost all levels of education.

In addition, the respondent emphasized the need for herself to teach students to appreciate others, and move away from the cultural norm of trying to be successful alone. The teacher's view goes beyond achieving just the EFL teaching goal, and she considered online collaborative learning tools as an important instrument to bring this home. Other respondents

endorsed this as they emphasized that the use of online collaborative learning tools could increase participation, engagement, and liveliness in the learning process when observed among the students whilst also making them sociable. They reiterated sociability while learning will be of great motivation to the students to want to learn more. Students want learning experiences that are social and that will connect them with their peers (James, Margaret, 2006)

There was an acknowledgment of engagement through debate as one of the skills encouraged by online collaborative learning tools. Ian Glover (2014) described debate as a discussion in which two or more people advocate opposing positions on a topic or question in an attempt to make an audience (or the other advocates) accept their position. He further stated that a reasoned debate allows students to explore and gain an understanding of alternative viewpoints and, for the participants, develops communication, critical thinking and argumentation skill. The use of debate in the EFL classroom is a great perk, in that the teacher is constantly confronted with differing world views. Debate lessons are a great way to take advantage of these points of view, especially to improve conversational skills (Kenneth Beare 2019). One of the respondents during the interview noted that her goal for using a specific collaborative learning tool with the students was to get them engaged in debates based on the given task.

Claims from the EFL teachers, and also backed up by research shows that social skills are being developed when students are given teamwork tasks (Group Dynamix, 2017, Mendo-Lázaro, 2018). It will help them appreciate the communication and also learn from different opinions, ideas, and principles between themselves, thereby helping their social skills. Not only that, but they also gain a certain level of confidence to express themselves using the targeted language, whilst they also build trust in each other (Mendo-Lázaro, 2018). A less-expressive student can become more open as trust develops among his or her peers.

It can be surmised that teachers from both the primary and secondary section hold a convincing perception that the use of online collaborative learning tools offers various advantages if adapted for students' use.

Research Question 2

This question is set to consider and examine different experiences EFL teachers must have had in the process of incorporating collaborating learning tools into their classroom activities.

Though the interview data revealed that respondents have good knowledge of the usefulness of collaboration technology to enhance students' engagement and brainstorming in the classroom, not all tend to have practical experience on the use of collaborative learning tools with students. Only a few of them showed strong familiarity with the use of online tools to further enhance students' collaboration. This situation raises the question, of what importance is the knowledge of something without the right application? This demonstrates that, in terms of pedagogy, teachers' knowledge has not produced any change in practice, as noted in Howard et al (2016). Responses from a number of teachers suggest that they believe collaboration learning only exists within the four walls of the classroom, where students are assigned to different groups to work on certain projects. This indeed shows that there is a low level of teachers' knowledge about the use of collaborative learning tools. Other responses given by various participants in this interview reveals their experiences of making use of technology devices in the classroom, but still, don't have an established idea of how these devices can be used meaningfully to teach and develop 21st-century skills in the students. This was earlier established in Alina (2016) that "although the use of technology in the classroom has increased significantly during the last years, there are still educators that are struggling with it, that feel left behind, and don't know how to include it in their instruction. The worst part is that there are some educators that actually completely refuse to use any educational technology". While the ignorance of online collaborative learning tools shown by these teachers could be from external factors, it still appears that some of the EFL teachers, especially in the primary section are less enthusiastic about the use of classroom technologies as a whole, which is considered to be as a result of lack of motivation. According to Yeung et al (2014), having a proper motivation is critical for teachers to integrate technology effectively into the school curriculum.

Furthermore, teachers who have practically used the collaborative learning tools with students narrated their experience in relation to a lack of student exposure to some of the collaborative learning tools introduced to them to work with, and this affected its effective adoption. One of the respondents from the secondary section of the school cited technological immaturity experienced among the students (in 5th grade), as some had difficulties assessing online tools with their passwords, thereby hindered the explorative use of the collaborative learning tools.

One major salient issue that was raised as part of the teacher's experience was linked to internet safety for the students. While the teacher was very motivated to ensure that she made students collaborate using online tools, she was occupied with the challenge of maintaining a balance between online safety and achieving learning goals. It is a general knowledge that as internet use by children and teenagers increases, so do concerns about their online safety (Adina, et al 2014). Therefore, providing a safe environment for the students should be a major concern for every teacher integrating technology in the classroom (Styron et al, 2015). Unfortunately, this concern eventually became a barrier for the teacher to make good use of the tools, as she was being cautious of the students' safety.

Research Question 3

The third research question in this study basically inquires about factors that teachers perceived as important to the successful adoption of collaborative learning tools for EFL learning. Answers to this question were generated through the interview questions that focus on challenges and teachers development.

Response from one of the EFL teachers in the primary section of the school depicts that they had no or lesser level of training on the use of collaborative learning tools and as a result, there is a limit in the productivity and effectiveness of these tools. According to Ertmer et al. (2012), inadequate professional development and training remain the most commonly cited reason for lack of technology implementation in the classroom. Notwithstanding, they know it is a good idea, based on their past experience or intuition but no formal training has been undertaken. The interview also showed that EFL teachers value the importance of training on how to nurture teamwork in students and identify red flags when using collaborative learning tools because it will soon become a modern trend.

From this claim and concern by teachers, one may conclude that a way of training the teachers on the nitty-gritty of the collaborative learning tools and ways of encouraging the students to appreciate these classroom technologies will not only sensitize the teachers to accommodate it in their teaching practice but will also make the students appreciate and adapt better to the use of these tools. To build teachers' knowledge to a sufficient level, boosting confidence in the process, training and support from the educational administrators is necessary (Johnson et al, 2016)

Such training would also go a long way to address the lack of exposure theme highlighted in this study. While few of the teachers actually made use of some tools which they introduced to the students, they lack adequate exposure to make the meaningful use of the tools. This is obvious in responses given by respondents SS01 and SS02 who acknowledged the use of BrainPOP and Microsoft Onenote applications with students in the classroom but with no history of assigning it to the students to work collaboratively online.

According to the information provided on BrainPOP website, the learning application can be used to collaborate, and strengthen students' systems thinking skills in the game environment, and it also encourages them to discuss or write about what they learned together. The Microsoft OneNote, on the other hand, is a typical online collaborative tool which teachers can assign for the students to work with as teams. Findings reveal that all the teachers in the school are mandated to use OneNote application, but for sending across students' individual holiday work. This is confirmed from a sharp response given by respondent SS02 when the interviewer asked if she specifically used OneNote application. *Yes, I had to… because we must (laughs).* There is an indication that the respondents are not exposed to such collaborative features inherent in the applications, not only in the secondary section of the school but also in primary section, as respondents PS01, PS01, and PS03 confidently listed similar applications in their responses to the question on familiarity with collaborative learning tools, but not for the purpose of collaboration. These are the areas where adequate and frequent training would be of great importance for the teachers.

Other factors such as students' ego, the suitability of the software, and safety precaution as major drawbacks in the use of the tools, were identified by teachers, and there is this probability that if they are properly addressed, there would be an improvement in the level of integration. One the respondents noted that her students couldn't be successful in teamwork activities given to them on with the tools because they all wanted to spearhead and show up their skills which undervalued the essence of using the collaborative learning tools. This raises the question of coordination while students are working collaboratively using online tools.

As revealed from the respondents' demographic information, they all have the experience of using technology in education, but going by the interview data, there seems to be a mismatch. All the respondents showed a great sign of familiarity with the traditional classroom collaboration, but out of the eight interviewed, only a few have the substantial and

practical history of integrating online tools to harness students collaboration. Some attributed their inability to adopt online collaborative learning tools to different situations and challenges. A Number of the respondents attributed their inability to Workload and Time Factor. There was a direct reference to how they are always occupied with a lot of work to cover in the curriculum, and by the time they are done, there's no time left to consider using online collaborative tools. Kelly (2019) noted that teachers are very busy and many will take the path of least resistance if not given the opportunity and time to learn how to best integrate technology into their lessons.

Looking into these responses from the teachers, one point that calls for attention is the fact that they have no time because of the way the school program is structured. In the 21st century, the structure of any school program should encourage collaboration using technology, not standing as a barrier to it. According to Paige (2009), adopting the 21st-century curriculum should blend knowledge, thinking, innovation skills, media, Information and Communication Technology (ICT) literacy, and real-life experience in the context of core academic subjects. Jacobsen (2001) argued that many technological tools can support different skills such as problem-solving, critical thinking, collaborative learning, and the learning environment. Therefore, the integration of technology into lesson delivery should be one of the hallmarks of any school program at this age. While the integration of technology is one of the key highlights in the Turkish National Curriculum, one is left with such question of why the school administration did not factor this into the teachers' scheme of work. The use of collaborative learning tools shouldn't be something a teacher struggles to squeeze into her plan, it ultimately should be part of her plan.

Directions for Further Research

This study was carried out with eight participants, which were only female teachers. The reason is that the school has just only two male EFL teachers, one being the researcher of this study. The other male teacher was not reachable in the course of preparing for the interview. To ensure the possibility of getting a well-balanced sample in the future, male teachers should be included both at primary and secondary school levels to see their experience about online collaborative learning.

Furthermore, future interactions with students; both in the secondary and primary level will also widen the scope on how to propagate collaborative learning tools. Additional interviews with parents on how they view these classroom technologies and how their wards react to online collaborative assignments outside the school premises can also provide a deeper understanding and mechanisms on improving the acceptability of teamwork activities. An assessment after implementing such acts in schools can also be of help.

Limitations of the Study

This study was carried out in only one school and based on the experience of eight teachers, which might not be adequate enough to draw a general conclusion on the use of collaborative learning tools in the whole of Turkey.

Also, the general limitation of qualitative research, of data being under the control of the respondents, applies to this study. The researcher is not able to have full verification of the results objectively against the scenarios stated by the respondents.

Conclusions and Recommendations

The main objective of this study is to investigate the experiences of EFL teachers in a school on how to fully integrate collaborative learning tools in and beyond their classrooms to foster engagement among their students. The use of Collaborative learning tools has been described to be of great importance as part of the ways for teachers to ensure learners are taught using such methods that resonate with their age. Most teachers still struggle with the use of collaborative tools despite how important it is. In order to raise the level of its adoption and usage, much still needs to be done, so that learners are not crippled in learning at such pace obtainable at the era they belong.

We live in a time when the rate at which things are changing technologically appear to be at jet pace. To be properly fit into the new educational world, and to ensure students are well prepared for the future challenges, stakeholders in education should ensure adequate provisions are made for both human and material resources needed to achieve success. This, therefore, places a great demand for adequate training for teachers on the need to integrate collaborative tools, and continuously use it to engage learners. No matter how technologically rich the curriculum of a nation is, if the teachers are not well equipped to implement it, it would be a total failure. Teachers are crucial in implementing educational reforms in accordance with the aspiration of the National Philosophy of Education. The success of a school curriculum is closely related to its effective implementation (Che O 2014). Such in-training programs should cover both the sensitization on the importance of collaborative learning tools and how to use the tools purposefully and meaningfully, which is the technical aspect. Moreover, Digital Citizenship Education should be structured into the school programs to enable the students to learn about the use of technology tools for learning benefits. They as well should learn about online safety, the norms of appropriate, and responsible behavior to help them consider their digital footprint. They should be made to know how their online ego could stand as a barrier to the achievement of their learning goals.

There is a need for flexibility in the school management policies to enable the teachers to have the liberty in choosing such tools that they consider appropriate for engaging students in the classroom. As revealed in this study, some of the respondents expressed the limitation they faced in introducing certain tools to the students, based on the laid down policy of the school. For teachers to be effective while carrying out their duties, they need to be afforded

such autonomy that allows them to be in control of their own work environment. Maria Erss (2018) identified two forms of teachers autonomy, that is, general autonomy which refers to decisions about classroom standards and personal on-the-job discretion, and curricular autonomy which is related to the selection of activities, materials, methods, and sequencing of instruction. Such flexibility will indeed help the teachers to be in charge of whatever tools they choose to use to engage students, without any external pressure from the school management.

In the same vein, it is also pertinent for schools to have on the ground a professional educational technologist, who helps the teachers out with the technical aspect of the collaborative tools when they encounter any problem or challenge. For instance, one of the respondents in this study decided not to go further with one of the tools because of her concern about the use of video with students without compromising their privacy and safety. At this stage, the intervention of the educational technologist would have been a remarkable one. The role of the educational technologist here is not the same as the role of the school ICT personnel. While the former is trained and deals more with technologies related to teaching and learning, the former is more concerned about the broad range of tools that are used for informational and communication purposes, both in educational settings and administration.

Finally, it would be of great importance to note that the school should improve their communication with parents on the need for the students to work collaboratively while outside the confine of the school. 21-century education is such that extends teachers' connection with the students beyond the classroom, through the use of technology. As noted by one of the respondents, parents do show a certain level of dissatisfaction when their children are being occupied with school work at home, which actually doesn't allow the children to share quality time with the family. Familiarizing the parents with the idea behind the collaborative tasks would definitely be of assistance.

In conclusion, this study establishes the fact that there is still a wide gap between the current level of EFL teachers' experience about the use of collaborative learning tools and the demands and standards of 21st-century education. Therefore, in order to avoid paralyzing the fitness of these students into the era they belong, education stakeholders are encouraged to work towards bridging such gap.

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Author's declaration

I hereby declare that I have written this thesis independently and that all contributions of other authors and supporters have been referenced. The thesis has been written in accordance with the requirements for graduation theses of the Institute of Education of the University of Tartu and is in compliance with good academic practices.

Signature Date

References

Adina F., Rebecca S., and John V. (2014). Youth Internet Safety: Risks, Responses, and Research Recommendations. Retrieved from https://www.brookings.edu/wp-content/uploads/2016/06/Youth-Internet-Safety_v07.pdf

Afrin, S. (2016). Writing Problems of Non-English Major Undergraduate Students in Bangladesh: An Observation. Open Journal of Social Sciences, 104-115.

Agata, S. (2016.). No child left alone: The ClassDojo app. Retrieved from https://www.academia.edu/26637009/No_child_left_alone_The_ClassDojo_app

Alina T. (2016). Why are some educators still reluctant to using technology in the classroom? Retrieved from https://blog.neolms.com/educators-still-reluctant-using-technology-classroom/

Aliya, M. (2015). The Role Of Teachers' Attitudes Toward Technology Integration In School; The Eurasia Proceedings of Educational & Social Sciences (EPESS). Retrieved from http://dergipark.gov.tr/download/article-file/331882

Anderson, G. (1990). Fundamentals of educational research. London: The Falmer Press.

Ashong, C.Y., Commander, N.E. (2012). Ethnicity. Gender, and perceptions of online learning in higher education. MERLOT Journal of Online Learning and Teaching, 8(2), 98-110. Retrieved from http://jolt.merlog.org/vol8no2/ashong_0612.pdf

Buchanan, J. & Jones, M. L. (2010). The efficacy of utilizing Nvivo for interview data from the electronic gaming industry in two jurisdictions. Review of Management Innovation & Creativity, 3 (5), 1-15.

Bulmer, M. (2004): Questionnaires, 1st edition, Sage Benchmarks in Social Science Research Methods, edited by Bulmer, M., Sage Publications, London, 354 pp.

Brindley, J., Blaschke, L. M., & Walti, C. (2009). Creating effective collaborative learning groups in an online environment. The International Review of Research in Open and Distance Learning, 10(3). Retrieved on January 5th, 2014, from http://www.irrodl.org/index.php/irrodl/article/view/675/1271

Capdeferro, N., & Romero, M. (2012). Are online learners frustrated with collaborative learning experiences? *The International Review of Research in Open and Distance*

Learning, *13*(2), 26-44. Retrieved on January 5th, 2014, from http://www.irrodl.org/index.php/irrodl/article/view/1127/.

Born, C. J. (2017) Tracking Student Progress to Assist Metacognition & Self-Regulated Learning. Retrieved from https://blogs.carleton.edu/academictechnology/2017/03/06/tracking-student-progress-to-assist-metacognition-self-regulated-learning/

Che Mohd Zulkifli Che Omar (2014) The Need for In-Service Training for Teachers and Its Effectiveness In School; International Journal for Innovation Education and Research Vol.2-11, 2014. Retrieved from https://www.ijier.net/index.php/ijier/article/download/261/181/

Creswell, J. W. (2005). Educational research: Planning, conducting, and evaluating quantitative and qualitative research (2nd ed.). Upper Saddle River, NJ: Pearson.

David P. (2010) Why Don't Teachers Collaborate? A Leadership Conundrum; Phi Delta Kappan 92, no. 1 pp54-56

Denscombe, M. (2007). The good research guide for small-scale social research projects. (3rd ed.). New York: McGraw-Hill.

Dikusar, A. (2018). The Use Of Technology In Special Education. Retrieved from https://elearningindustry.com/use-of-technology-in-special-education

Duffy P., Bruns A. (2006), The Use of Blogs, Wikis, and RSS in Education: A Conversation of Possibilities, in Proceedings Online Learning and Teaching Conference 2006, pp 31-38, Brisbane.

Eady, M. J. & Lockyer, L. 2013, 'Tools for learning: technology and teaching strategies', Learning to Teach in the Primary School, Queensland University of Technology, Australia. pp. 71

Enobun, O. Constructivism and Web 2.0 in the Emerging Learning Era: A Global Perspective. *Journal of Strategic Innovation and Sustainability.* Vol. 6(4) 2010 pp. 17-27.

Ertmer, P.A. (1999). Addressing first-and second-order barriers to change: Strategies for technology integration. Educational Technology Research and Development, 47(4), 47-61.

Escueta, M., Quan, V., Nickow, A.J., Oreopoulos, P. "Education Technology: An Evidenced-Based Review". NBER Working Paper Series. (2017). Retrieved from: http://www.nber.org/papers/w23744/

eTwinning (2016) Growing Digital Citizens: Developing active citizenship through eTwinning. Retrieved from https://www.etwinning.net/eun-files/book2016/eTwinningBook_2016.pdf

Fouts, J.T. (2000). *Research on Computers and Education: Past, Present, and Future.* Retrieved from: http://www.portical.org/fouts.pdf/

Gerbic. P. (2010) Getting the blend right in new learning environments: A complementary approach to online discussions. *Educational Information Technology*, 15, pp. 125–137.

Gokhale, A.A., 1995: *Collaborative learning enhances critical thinking.* Journal of Technology Education, 7(1), Collaborative learning enhances critical thinking, [online] at http://scholar.lib.vt.edu/ejournals/JTE/v7n1/gokhale.jte-v7n1.html

Group Dynamic (2017) How Teamwork Helps Kids Succeed in Life. Retrieved from https://groupdynamix.com/teamwork-kids-succeed-in-life/

Halah A.A., Patrick M. (2015) 21st Century Standards and Curriculum: Current Research and Practice; Journal of Education and Practice www.iiste.org; (Online) Vol.6, No.6, 2015; Retrieved from https://files.eric.ed.gov/fulltext/EJ1083656.pdf

Howard, S. K. & Mozejko, A. (2015). Teachers: technology, change, and resistance. In M. Henderson & G.Romeo (Eds.), Teaching and Digital Technologies: Big Issues and Critical Questions (pp. 307-317). Port Melbourne, Australia: Cambridge University Press.

Ian Glover (2014) Debate: An Approach to Teaching and Learning; https://blogs.shu.ac.uk/shutel/2014/09/02/debate-an-approach-to-teaching-and-learning/?doing_wp_cron=1554205299.0222840309143066406250

Jacobsen, M. (2001). Building different bridges: Technology integration, engaged student learning, and new approaches to professional development. Educational Research Association, Seattle, WA, 1(3), 29. Retrieved from http://www.eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=ED453232

James A. W., Margaret L. W. (2006) Using Wikis for Online Collaboration: The Power of the Read-Write Web. Retrieved from https://books.google.co.vi/books?id=PmybP2T2LYwC&printsec=frontcover&dq=online+collaborative+learning+tools&hl=en&sa=X&ved=0ahUKEwibtOqloLniAhVLzqYKHZUtBVQQ6AEIPzAE#v=onepage&q=online%20collaborative%20learning%20tools&f=false

Januszewski, A., Molenda, (2008) Educational Technology: The Development of a Concept. Libraries Unlimited.

Jiang, Y.M. (2009). Applying Group Work to Improve College Students‟ Oral English. Int. Educ. Stud 2. (3):136–139.

Johnston, C.G., James, R.H., Lye, J.N., McDonald, I.M., (2000). An Evaluation of Collaborative Problem Solving for Learning Economics. Journal Economics Education 31(1):13–29.

Johnson, D.W., Johnson, R.T. Making cooperative learning work. Theory Into Practice, 38, 67-73.10.1080/00405849909543834 [Taylor & Francis Online], [Web of Science ®], [Google Scholar].

Johnson, A. M., Jacovina, M. E., Russell, D. E., & Soto, C. M. (2016). Challenges and solutions when using technologies in the classroom. In S. A. Crossley & D. S. McNamara (Eds.) Adaptive educational technologies for literacy instruction (pp. 13-29). New York: Taylor & Francis. Published with acknowledgment of federal support.

Joyce W. (2015) The Role of Technology in the Educational Process http://bit.ly/2CPCaRP

Kele A. (2016) teachers' perception concerning the use of web 2.0 applications following professional development. Retrieved from https://uh-ir.tdl.org/handle/10657/1284

Kelly, M. (2019). Issues With Integrating Technology in the Classroom. Retrieved from https://www.thoughtco.com/issues-integrating-technology-in-classroom-8434

Kenneth Beare (2019) Using Debates to Expand ESL Instruction. Retrieved from https://www.thoughtco.com/debate-lessons-for-the-esl-classroom-1211082

Khalid, A.B. (2009). Barriers to the Successful Integration of ICT in Teaching and Learning Environments: A Review of the Literature, in Eurasia Journal of Mathematics, Science, and Technology Education, (3), pp 235-245

Kusum K. (2014) Child Psychology and Education with Technology; in International Journal of Education and Information Studies. Volume 4, Number 1 (2014), pp. 41-45

Li, L., Pitts, J. (2009). Does It Really Matter? Using Virtual Office Hours to Enhance Student-Faculty Interaction. *Journal of Information Systems Education*, 20(2), 175-185.

Liu, S., Joy, M., & Griffiths, N. (2010, July). Students' perceptions of the factors leading to unsuccessful group collaboration. In *Advanced Learning Technologies (ICALT), 2010 IEEE 10th International Conference on* (pp. 565-569). Sousse, Tunisia, 5-7 July 2010.

Lint, Katrina, "The effects of using digital tools to support writing in the ELL classroom" (2017). Graduate Research Papers. 185. https://scholarworks.uni.edu/grp/185

Maria Erss (2018) 'Complete freedom to choose within limits' – teachers' views of curricular autonomy, agency, and control in Estonia, Finland, and Germany, The Curriculum Journal, 29:2, 238-256, DOI: 10.1080/09585176.2018.1445514

Mattar, J. A. (2010). Constructivism and connectivism in education technology: Active, situated, authentic, experiential, and anchored learning. *Technology*, 1-16.

Mendo-Lázaro, S., León-Del-Barco, B., Felipe-Castaño, E., Polo-Del-Río, M., & Iglesias-Gallego, D. (2018). Cooperative Team Learning and the Development of Social Skills in Higher Education: The Variables Involved. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6113388/

Muhammad U.F. & Abdul F.S. (2018) Teachers and Technology: Trends in English Language Teaching in Saudi Arabia; International Journal of English Linguistics; Vol. 8, No. 5; 2018 Published by Canadian Center of Science and Education.

Muuro, Wagacha, Oboko, and Kihoro (2014) Students' Perceived Challenges in an Online Collaborative Environment: A Case of Higher Learning Institutions in Nairobi, Kenya; http://www.irrodl.org/index.php/irrodl/article/download/1768/3180/

NETP (2017) Reimagining the Role of Technology in Education. 2017 National Education Technology Plan Update, Retrieved from https://tech.ed.gov/files/2017/01/NETP17.pdf

Newhouse, P. (1999). Examining how teachers adjust to the availability of portable computers. Australian Journal of Educational Technology, 15(2), 148-166. https://doi.org/10.14742/ajet.1854

OECD (2017), PISA 2015 Collaboratıve Problem-Solvıng Framework https://www.oecd.org/pisa/pisaproducts/Draft%20PISA%202015%20Collaborative%20Problem%20Solving%20Framework%20.pdf

Oppenheim, A. N. (1992) Questionnaire Design, Interviewing and Attitude Measurement, Continuum, London, 303 pp.

O'Reilly, T. (2007), "What is Web 2.0: Design Patterns and Business Models for the Next Generation of Software." *Communications & Strategies*, (65), 17-37.

Paige, J. (2009). The 21st-century skills movement. Educational Leadership, 9(67). 11-11. Partnership for 21st Century Skills. (2006). Framework for 21st-century learning. Retrieved from http://www.p21.org/documents/ProfDev.pdf

Pattanpichet, F. (2011). The effects of online of using collaborative learning to enhance students' English-speaking achievement. *Journal of College Teaching & Learning,* 8(11), 1-10.

Pierre, D. (1999) What do you mean by collaborative learning?. P. Dillenbourg. Collaborative Learning: Cognitive and Computational Approaches., Oxford: Elsevier, pp.1-19.

Rana M.D.& Muhammad I.L. (2013) Focus Group Interview as a Tool for Qualitative Research: An Analysis. Pakistan Journal of Social Sciences (PJSS) Vol. 33, No. 1 (2013), pp. 191-198

Roberts, T. S., & McInnerney, J. M. (2007). Seven problems of online group learning (and their solutions). Educational Technology & Society, 10(4), 257-268.

Robin Newton (2012) Working with Students Who Have a Hard Time Collaborating. https://www.edutopia.org/blog/why-students-wont-collaborate-robin-newton

Roschelle, J., and S.D. Teasley (1995), "The construction of shared knowledge in collaborative problem-solving", in O'Malley, C.E. (ed.), Computer-supported collaborative learning, Springer-Verlag, Berlin, pp. 69-97.

Sang, K.J.C. & Sitko, R. (2015) "Chapter 8 Qualitative Data Analysis Approaches" In O' Gorman, K.D. & MacIntosh, R. (ed). Oxford: Goodfellow Publishers http://dx.doi.org/10.23912/978-1-910158-51-7-2775

Sarah J. (2013) How Technology Can Encourage Student Collaboration. Retrieved from https://www.commonsense.org/education/articles/how-technology-can-encourage-student-collaboration

Schoepp, K. (2005). Barriers to technology integration in a technology-rich environment. Learning and Teaching in Higher Education: Gulf Perspectives, 2(1), 1-24.

Seidman, I.E. (1998). Interviewing as qualitative research: A guide for researchers in education and the social sciences (2nd Ed.). New York, NY: Teachers College Press.

Spector, J.M.(2015). Foundations of educational technology: Integrative approaches and interdisciplinary perspectives. Routledge.

Srinivias, H. (2011). What is Collaborative Learning? The Global Development Research Center, Kobe: Japan, Retrieved 5 Nov. 2011, Retrieved from http://www.grdc.org/kmgmt/c-learn/index.html

Styron, A., R., Bonner, L.|Styron, J., L.|Bridgeforth, J., James|Martin, & Cecelia. (2015, November 30). Are Teacher and Principal Candidates Prepared to Address Student Cyberbullying?. Retrieved from https://eric.ed.gov/?id=EJ1104426

Technopedia. Definition - What does Web 1.0 mean? https://www.techopedia.com/definition/27960/web-10

Thibodeaux, W. (2011) Guidelines for transcribing interviews. Retrieved from https://ourpastimes.com/how-to-transcribe-interviews-12124155.html

Tiven, M. B., Fuchs, E. R., Bazari, A., & MacQuarrie, A. (2018). Evaluating Global Digital Education: Student Outcomes Framework. New York, NY: Bloomberg Philanthropies and the Organisation for Economic Co-operation and Development."

Uzner, S. (2009). Questions of culture in distance learning: a research review. *International Review of Research in Open and Distance Learning.* 10(3), 1-19.

Van Braak, J. (2001). Factors influencing the use of computer-mediated communication by teachers in secondary schools. Computers & Education, 36(1), 41-57.

Wachira, P., & Keengwe, J. (2012). Technology integration barriers urban school mathematics teachers' perspective. Science Education Technology Journal, 20(1), 17-25. https://doi.org/10.1007/s10956-010-9230-y

WSLearning (2016). The Critical 21st Century Skills Every Student Needs And Why https://www.wabisabilearning.com/blog/21st-century-skills-every-student-needs

Yeung, A. S., Tay, E., Hui, C., Lin, J. H., & Low, E. (2014). Pre-service Teachers' Motivation in Using Digital Technology. Australian Journal of Teacher Education, 39(3).

Zamawe F. C. (2015) The Implication of Using NVivo Software in Qualitative Data Analysis: Evidence-Based Reflections. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4478399/

Zhang, Y. (2010). Cooperative language learning and foreign language learning and teaching. *J Lang Teach Res*. 1(1):81–83.

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https://educators.brainpop.com/tools-features-support/ideas-for-integration/
https://about.brainpop.com/features/

Appendix A

Interview Questions

Before the interview began, the general concept of collaborative learning tools was discussed.

1. Are you familiar with any collaborative learning tool, which you have introduced to the students for learning purposes?
2. How was the experience like trying to integrate the collaborative learning tools?
3. How effective was this tool in helping to achieve your teaching goals (speaking, listening, writing, reading skills)?
4. Has there been any form of challenge that you have come across in using these collaborative learning tools?
5. Did you attend any training for using engaging students in collaboration in the classroom, or you just feel it's a good thing?
6. Would you like to learn about using technology for students to collaborate in and outside the classroom?

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